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no. 75-77

## OTHER MAPS.

*California, Showing Mineral Deposits (50x60 in.)—	Price
Mounted -----	\$1.50
Forest Reserves in California—	
Mounted -----	.50
Unmounted -----	.30
*Mineral and Relief Map of California-----	-----
El Dorado County, Showing Boundaries of National Forests-----	.20
Madera County, Showing Boundaries of National Forests-----	.20
Placer County, Showing Boundaries of National Forests-----	.20
Shasta County, Showing Boundaries of National Forests-----	.20
Sierra County, Showing Boundaries of National Forests-----	.20
Siskiyou County, Showing Boundaries of National Forests-----	.20
Trinity County, Showing Boundaries of National Forests-----	.45
Tuolumne County, Showing Boundaries of National Forests-----	.20
*Mother Lode Region -----	-----
Desert Region of Southern California -----	.10
Minaret Region, Madera County-----	.20
Copper Deposits in California-----	.05
Calaveras County -----	.25
Plumas County -----	.25
Tuolumne County -----	.25
Geological Map of California (mounted)—50x60 inches-----	2.50

## DETERMINATION OF MINERAL SAMPLES.

Samples (limited to three at one time) of any mineral found in the state may be sent to the Bureau for identification, and the same will be classified free of charge. No samples will be determined if received from points outside the state. It must be understood that no assays or quantitative determinations will be made. Samples should be in lump form if possible, and marked plainly with name of sender on outside of package, etc. No samples will be received unless delivery charges are prepaid. A letter should accompany sample, giving locality where mineral was found and the nature of the information desired.

CALIFORNIA STATE MINING BUREAU

FERRY BUILDING, SAN FRANCISCO

ETCHER HAMILTON, - - - - State Mineralogist

San Francisco

BULLETIN No. 77

December, 1917

# CATALOGUE

OF THE

# Publications of the California State Mining Bureau

1880 - 1917



CALIFORNIA STATE PRINTING OFFICE  
SACRAMENTO  
1918

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CALIFORNIA STATE MINING BUREAU

FERRY BUILDING, SAN FRANCISCO

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COMPLIMENTS OF  
FLETCHER HAMILTON  
STATE MINERALOGIST

By E. S. BOALICH



CALIFORNIA STATE PRINTING OFFICE  
SACRAMENTO

1918

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## LETTER OF TRANSMITTAL.

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November 1, 1917.

Hon. WM. D. STEPHENS,  
*Governor of California.*

SIR: I take pleasure in transmitting herewith Bulletin No. 77 of the State Mining Bureau, entitled "Catalogue of the Publications of the California State Mining Bureau, 1880-1917."

In these days of stress, when data relative to the availability of raw materials to meet the Nation's needs may at any time be of the utmost value, I have deemed it expedient and proper to take this means of further disseminating the fund of information relative to California's mineral industries, which lies within the covers of the reports and bulletins of this Department.

Respectfully submitted.

FLETCHER HAMILTON,  
State Mineralogist.



## INTRODUCTORY.

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The California State Mining Bureau was created April 16, 1880. According to its organic Act one of the duties of the State Mineralogist, who was named as executive head of the bureau, was to “\* \* \* visit the several mining districts of each county in the State, ascertain and record their history, describe their geological formation, the character of the mines and ores and the general development of the district.” Also “to obtain and preserve for public use such information respecting improvements in mining and mining machinery as will be of practical value to the people of the State.”

In the carrying out of these provisions of the Act, during the past 37 years, there have been published by the bureau reports, bulletins and maps which go to make up a library of detailed information as regards mining in California, a large part of which could not be duplicated from any other source.

One feature which has added to the popularity of these publications is that many of them have been distributed without cost to the public, and even the more elaborate ones have been sold at a cost to cover actual printing charges, only.

It is the purpose of this bulletin to offer a complete catalogue of these publications and convey a brief idea of the contents of each, in the belief that this information may prove to be of value to the mining public and may lead to the further development of California's mineral resources.

Owing to the fact that funds for the advancing of the work of this department have often been limited, many of the bulletins and reports mentioned were printed in limited editions which are now entirely exhausted. Copies of such publications are available for reference, however, at the bureau's offices in the Ferry Building, San Francisco, Union League Building, Los Angeles, Santa Maria, Taft, Bakersfield, Coalinga, and Santa Paula, as well as in many public, private, and scientific libraries of California and other states, and foreign countries.

Those which are still in stock may be obtained by addressing the State Mineralogist, Ferry Building, San Francisco, Cal., and enclosing the requisite amount, in the case of bulletins which have a list price. The Bureau is authorized to receive only coin, stamps or money orders, and it will be appreciated if remittance is made in this manner rather than by personal check.

Further information relative to any phase of mining in California will be immediately furnished upon request and data contained in any

of the following reports which may be desired by persons living at points lacking in library facilities will also be gladly supplied whenever possible.

Though the publications are listed in chronological order, according to the classification in which they fall, the attention of those interested in obtaining a full record of any particular subject is directed to the index of this bulletin where such references are grouped under the proper headings, alphabetically arranged.

REPORTS.

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**First Annual Report of the State Mineralogist, 1880, 43 pp. By Henry G. Hanks.**

(Out of Print.)

HISTORY AND ORIGIN OF BUREAU.

CALIFORNIA STATE GEOLOGICAL SOCIETY.

MINERALS OF PACIFIC COAST.

Report of Chemist.

Analyses of clay from a deposit at Lincoln, Placer County.

NOTES ON PROSPECTING.

OCCURRENCE OF ELECTRUM IN CALIFORNIA.

Quicksilver.

Iron.

Salt.

Tin.

Chromite.

Building materials.

Clay deposits.

Black sands.

Rusty gold.

---

**Second Annual Report of the State Mineralogist, 1882. 514 pp., 4 illustrations, 1 map. By Henry G. Hanks.**

(Out of Print.)

FAMOUS GOLD NUGGETS.

HYDRAULIC MINING.

DRIFT MINING.

GENERAL GEOLOGY.

ASSAY OF GOLD.

IRON ORES OF CALIFORNIA.

BEACH SANDS.

SALT IN CALIFORNIA.

MUD VOLCANOES IN COLORADO DESERT.

DIAMONDS IN CALIFORNIA.

NOTES ON MICA.

DIATOMACEOUS EARTHS.

GLOSSARY OF MINING TERMS.

APPENDIX:

Rare Minerals Recently Found in the State, by W. P. Blake.

The Milling of Gold Quartz, by Melville Attwood.

Forest Trees of California, by Dr. A. Kellogg.

Notes on Hydraulic Mining, by F. W. Robinson.

Hydraulic and Drift Mining, by H. DeGroot.

Flour Gold, by A. B. Paul.

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**Third Annual Report of the State Mineralogist, 1883, 111 pp., 21 illustrations. By Henry G. Hanks.**

(Out of Print.)

WORK OF THE BUREAU.

GOLD IN TAILINGS.

MICROSCOPE SLIDE SHOWING CONDITION OF ALLUVIAL GOLD.

REPORT ON THE BORAX DEPOSITS OF CALIFORNIA AND NEVADA, DESCRIBING DEPOSITS IN THE TWO STATES AND GIVING PRODUCTION, CONSUMPTION, USES, HISTORY, CHEMISTRY AND OTHER GENERAL INFORMATION.

**Fourth Annual Report of the State Mineralogist, 1884, 410 pp., 7 illustrations. By Henry G. Hanks.**

(Out of Print.)

HISTORY OF GEOLOGICAL SURVEYS OF CALIFORNIA.  
 HISTORY OF EARLY GOLD DISCOVERIES IN CALIFORNIA.  
 RESUME OF THE AGRICULTURAL, COMMERCIAL, AND MANUFACTURING RESOURCES OF THE STATE.  
 DESCRIPTION OF THE ECONOMIC MINERALS OF CALIFORNIA, TOGETHER WITH PRINCIPAL LOCALITIES WHERE THEY ARE FOUND.  
 TABLE OF FINENESS OF CALIFORNIA GOLD.  
 IRON ORES OF CALIFORNIA.  
 EARLY HISTORY OF PETROLEUM IN THE UNITED STATES.  
 QUICKSILVER DEPOSITS.  
 SILVER.  
 SULPHUR.  
 LIME AND LIMESTONE.  
 CHROME ORES.  
 LEAD.  
 CLAYS.  
 TESTING AND ASSAYING GOLD AND ITS ORES.

---

**Fifth Annual Report of the State Mineralogist, 1885, 234 pp., 15 illustrations. 1 geological map. By Henry G. Hanks.**

(Out of Print.)

REPORT OF THE STATE MINING BUREAU'S EXHIBIT AT THE NEW ORLEANS EXPOSITION AND NOTES ON EXHIBITS FROM OTHER STATES.  
 TESTING ORES FOR GOLD.  
 MINERALS OF CALIFORNIA.  
 IRON ORES IN CALIFORNIA.

---

**Sixth Annual Report of the State Mineralogist, Part I, 1886, 145 pp., 3 illustrations, 1 map. By Henry G. Hanks.**

**Part II, 1887, 222 pp., 36 illustrations. By William Ireland, Jr.**

(Out of Print.)

ECONOMIES OF MINING.  
 BUILDING STONES AND BUILDING MATERIALS IN CALIFORNIA.  
 TABLE OF ALTITUDES.  
 MINERAL SPRINGS IN CALIFORNIA.  
 CHAPTER DESCRIBING SAN DIEGO COUNTY WITH PARTICULAR REFERENCE TO ITS MINING DISTRICTS.  
 ECONOMIC MINERALS OF CALIFORNIA, TOGETHER WITH A DESCRIPTION OF THE OCCURRENCE OF EACH.  
 PRODUCTION OF QUICKSILVER IN CALIFORNIA.  
 REPORTS ON INDIVIDUAL MINES OF AMADOR, BUTTE, CALAVERAS, EL DORADO, FRESNO, NEVADA, SIERRA, AND TUOLUMNE COUNTIES.  
 MINE DRAINAGE, BY CHARLES G. YALE.  
 SPECIFICATIONS OF STAMP MILLS FOR THE TREATMENT OF GOLD AND SILVER ORES WITH WEIGHT OF THE VARIOUS PARTS.  
 CONCENTRATION OF ORES, BY J. M. ADAMS.  
 CHLORINATION.  
 UNITED STATES MINING LAWS.  
 METHOD FOR DETERMINATION OF VALUE OF GOLD OR SILVER IN A SPECIMEN, BY C. H. AARON.  
 TABLES ON PRACTICAL HYDRAULICS, BY P. M. RANDALL.  
 ROUTES OF TRAVEL, MODES OF CONVEYANCE, AND DISTANCES FROM SAN FRANCISCO.

**Seventh Annual Report of the State Mineralogist, 1887, 315 pp. By William Irelan, Jr.**

(Out of Print.)

DESCRIPTION OF PETROLEUM FIELDS IN CALIFORNIA.  
PETROLEUM REFINING.  
COAL IN CALIFORNIA, BY W. A. GOODYEAR.  
NATURAL GAS IN CALIFORNIA.  
BUILDING STONES OF CALIFORNIA.  
CATALOGUE OF CALIFORNIA FOSSILS, BY J. G. COOPER.

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**Eighth Annual Report of the State Mineralogist, 1888. 948 pp., 122 illustrations. By William Irelan, Jr.**

(Out of Print.)

NOTES ON HYDROMETALLURGY OF GOLD AND SILVER, BY C. H. AARON.  
LITHOLOGY OF WALL ROCKS, BY MELVILLE ATTWOOD.  
BUILDING STONES, BY A. W. JACKSON.  
DRIFT MINING IN CALIFORNIA, BY R. L. DUNN.  
OWENS VALLEY EARTHQUAKE.  
MILLING OF CALIFORNIA GOLD ORES.  
IMPORTS OF MINERALS AND MINERAL PRODUCTS INTO THE PORT OF SAN FRANCISCO FOR THE FISCAL YEAR ENDING JUNE 30, 1887.  
TABULATED LIST AND DESCRIPTION OF STAMP MILLS IN CALIFORNIA.  
NOTES ON WESTERN LEAD SMELTERS, BY W. S. KEYES.  
TABULAR STATEMENT SHOWING WATER WHEELS USED IN AMADOR, CALAVERAS, EL DORADO, AND TUOLUMNE COUNTIES.  
UNITED STATES PATENTS IN CALIFORNIA.  
YIELD OF THE BODIE MINES, MONO COUNTY.  
DETAILED REPORTS ON MINERAL RESOURCES OF STATE ARRANGED BY COUNTIES.

---

**Ninth Annual Report of the State Mineralogist, 1889. 352 pp., 57 illustrations, 2 maps. By William Irelan, Jr.**

(Out of Print.)

AURIFEROUS GRAVELS OF CALIFORNIA, BY JOHN HAYES HAMMOND.  
REPORT ON SAN NICOLAS ISLAND, BY DR. STEPHEN BOWERS.  
REPORT ON CHANNEL ISLANDS, BY DR. L. G. YATES.  
VALUE OF FOSSILS AS INDICATIONS OF IMPORTANT MINERAL PRODUCTS, BY DR. J. G. COOPER.  
MANUFACTURE OF GLASS IN CALIFORNIA.  
RIVER MINING, BY R. L. DUNN.  
CLAYS, BY W. D. JOHNSTON.  
REPORT ON GEOLOGICAL SURVEY OF CALIFORNIA, BY H. I. WILLEY.  
REFINING AND COINING OF PRECIOUS METALS, BY S. GUMBINNER.  
POTTERY, BY LINNA IRELAN.  
SLATE QUARRYING IN CALIFORNIA.  
GEOLOGICAL AND MINING REPORTS ON SAN BERNARDINO, SAN DIEGO, LOS ANGELES AND SANTA CLARA COUNTIES.

**Tenth Annual Report of the State Mineralogist, 1890, 983 pp., 179 illustrations, 10 maps. By William Irelan.**

(Out of Print.)

REVIEW OF DESCRIPTIONS OF MINING DISTRICTS AND MINES OF CALIFORNIA, ALPHABETICALLY ARRANGED BY COUNTIES.

ANCIENT RIVER BEDS OF THE FOREST HILL DIVIDE, BY ROSS E. BROWNE.

ASPHALTUM MINE OF VENTURA ASPHALT COMPANY, BY E. W. HILGARD.

GAS WELL AT SUMMERLAND, BY F. H. WHEELAN.

GEOLOGY OF THE MOTHER LODE, BY H. W. FAIRBANKS.

GOLD EXTRACTION BY POTASSIUM CYANIDE, BY W. D. JOHNSTON.

The investigation of the cyanide process by the Bureau as herein described was among the first of such experiments made in the United States.

INTRODUCTION OF PRODUCER-GAS AT MARSAC MILL, UTAH, BY C. A. STETEFELDT.

LEAD SMELTING, BY F. C. VON PETERSDORFF.

QUICKSILVER MINES AND MINING, BY J. B. RANDOL.

MINING OF GOLD ORES IN CALIFORNIA, BY JOHN HAYS HAMMOND.

AURIFEROUS BEACH SANDS.

**Eleventh Report (First Biennial) of the State Mineralogist, for the two years ending September 15, 1892, 612 pp., 73 illustrations, 4 maps. By William Irelan, Jr.**

(Price \$1.00.)

REVIEW OF MINES OF STATE BY COUNTIES.

MINERAL SPRINGS IN SISKIYOU COUNTY, BY W. L. WATTS.

ORIGIN, DEVELOPMENT AND ESTABLISHMENT OF AMERICAN MINING LAW, BY A. K. RICKETTS.

HYDRAULIC EJECTORS, BY E. A. WILTSEE.

CHAPTERS ON THE GEOLOGY OF SHASTA, TEHAMA, COLUSA, LAKE, NAPA, SAN DIEGO, ORANGE AND SAN BERNARDINO COUNTIES.

**Twelfth Report (Second Biennial) of the State Mineralogist, for the two years ending September 15, 1894, 541 pp., 101 illustrations, 5 maps. By J. J. Crawford.**

(Out of Print.)

MAP OF CHANNEL SYSTEM OF HARMONY RIDGE, NEVADA COUNTY, BY ROSS E. BROWNE.

MAP OF PRINCIPAL GRAVEL MINES NEAR PLACERVILLE, BY R. ROWLANDS.

MAP OF AURIFEROUS CONGLOMERATE DEPOSITS, SISKIYOU COUNTY, BY R. L. DUNN.

MAP OF ANCIENT CHANNEL SYSTEMS OF CALAVERAS COUNTY, BY W. H. STORMS.

MAP OF THE AURIFEROUS CONGLOMERATE DEPOSIT BETWEEN SAN ANDREAS AND MOKELUMNE HILL, CALAVERAS COUNTY, BY W. H. STORMS.

ANTIMONY IN CALIFORNIA.

ARGENTIFEROUS GALENA.

ASPHALT.

BITUMINOUS ROCK.

BORAX.

CHROME IRON.

COAL IN CALIFORNIA.

COAL, ANALYSES OF.

COPPER.

GOLD IN CALIFORNIA, BY COUNTIES.

GEOLOGY OF MADERA AND MARIPOSA COUNTIES, BY W. H. STORMS.



GYP SUM IN CALIFORNIA.

IRON.

MAGNESITE.

MANGANESE.

MINERAL SPRINGS IN CALIFORNIA, WITH ANALYSES.

NATURAL GAS.

PETROLEUM.

QUICKSILVER.

SILVER.

STRUCTURAL MATERIALS:

Cement.

Clays, for brick and pottery.

Granite.

Macadam.

Marble, limestone, and lime.

Paving blocks.

Sandstone.

Steatite or soapstone.

Travertine and onyx.

Trachyte, tufa, and volcanic rock.

Asbestos.

Barite.

Diatomaceous earth.

Emery.

Mineral paint.

Natural carbonic acid gas.

Pectolite.

Platinum.

Salt.

Soda.

METHOD FOR DETERMINING AMOUNT OF GOLD IN SPECIMENS.

ELECTRIC TRANSMISSION PLANTS IN MINING OPERATIONS, BY THOMAS H. LEGGETT.

RED ROCK, GOLER AND SUMMIT DISTRICTS, KERN COUNTY, BY H. W. FAIRBANKS.

AURIFEROUS CONGLOMERATE IN CALIFORNIA, BY R. L. DUNN.

MINERAL DEPOSITS OF INYO, MONO, AND ALPINE COUNTIES, BY H. W. FAIRBANKS.

GEOLOGY OF A PORTION OF EL DORADO COUNTY, BY H. W. FAIRBANKS.

ANCIENT CHANNEL SYSTEM OF CALAVERAS COUNTY, BY W. H. STORMS.

GEOLOGY OF NORTHERN VENTURA, SANTA BARBARA, SAN LUIS OBISPO, MONTEREY AND SAN BENITO COUNTIES, BY H. W. FAIRBANKS.

STATE MINING BUREAU ACT.

MINE BELL SIGNALS.

HYDRAULIC MINING DEFINED.

CAMINETTI ACT.

DEBRIS COMMISSION ACT.

**Thirteenth Report (Third Biennial) of the State Mineralogist, for the two years ending September 15, 1896, 726 pp., 93 illustrations, 1 map. By J. J. Crawford.**

(Out of Print.)

GEOLOGICAL MAP OF MOTHER LODE BELT IN EL DORADO COUNTY, BY H. LAHIFF.  
ANTIMONY.

ARGENTIFEROUS GALENA.

ASPHALT AND BITUMINOUS ROCK.

BORAX.

CHROMIC IRON.

COAL.

COPPER.

GOLD (BY COUNTIES). IN GOLD CHAPTER ARE FOLLOWING MISCELLANEOUS SUBJECTS:

Tailings sampler.

Toms for beach sands.

Tailings, washing.

Steam shovel.

Diestelhorst dredge.

Current wheels.

Arastra, double.

Conveyor reel.

Rock conveyor for hydraulic mines.

Steel-capped riffle bars.

Water blast.

Ore drier.

GYPSUM.

IRON.

MAGNESITE.

MANGANESE.

MINERAL SPRINGS, ANALYSES.

MINING CANALS.

NATURAL GAS.

PETROLEUM.

QUICKSILVER.

STRUCTURAL MATERIALS:

Asbestos.

Chrysoprase.

Diamonds.

French chalk.

Graphite.

Infusorial earth.

Mineral paint.

Platinum.

Salt.

Soda.

Sulphur.

Zinc.

PRESERVATION OF STRUCTURAL TIMBERS, BY JOHN D. ISAACS.

METHODS OF REFINING PETROLEUM, BY F. SALATHE.

OIL AS FUEL IN LOS ANGELES COUNTY, BY W. L. WATTS.

ORE DEPOSITS WITH REFERENCE TO MOTHER LODE, BY H. W. FAIRBANKS.

ELECTRIC POWER TRANSMISSION PLANTS IN CALIFORNIA, BY W. F. C. HASSON.

SAMPLING AND MEASUREMENT OF ORE BODIES IN MINE EXAMINATIONS, BY E. B. KIRBY.

COMSTOCK ORE SAMPLING, BY JOHN D. MCGILLIVRAY.

WATER POWER AND COMPRESSED AIR TRANSMISSION PLANT AT NORTH STAR MINE. BY A. D. FOOTE.

COMPRESSED AIR AS MOTIVE POWER, BY J. W. BUELL.

ACT FOR CONSTRUCTING AND REPAIRING RESTRAINING BARRIERS IN CALIFORNIA RIVERS.

**Fourteenth Report of the State Mineralogist**, for the biennial period 1913-1914; 1915, 974 pp., 275 illustrations. By Fletcher Hamilton.

(Price \$2.00.)

This volume contains a complete general report upon the mines and mineral resources of the following counties: Amador, Calaveras, Tuolumne, Colusa, Glenn, Lake, Marin, Napa, Solano, Sonoma, Yolo, Del Norte, Humboldt, Mendocino, Fresno, Kern, Kings, Madera, Mariposa, Merced, San Joaquin, Stanislaus, San Diego, Imperial, Shasta, Siskiyou, Trinity.

**Advance chapters** of the above were printed, and are available, as follows:

	Price
Amador, Calaveras and Tuolumne Counties—W. B. Tucker. 1915----	\$0.50
Colusa, Glenn, Lake, Marin, Napa, Solano, Sonoma and Yolo Counties—Walter W. Bradley. 1915-----	.50
Del Norte, Humboldt and Mendocino Counties—F. L. Lowell. 1915---	.25
Fresno, Kern, Kings, Madera, Mariposa, Merced, San Joaquin and Stanislaus Counties—Walter W. Bradley, G. C. Brown, F. L. Lowell, and R. P. McLaughlin. 1915-----	.50
Imperial and San Diego Counties—F. J. H. Merrill. 1914-----	.30
Shasta, Siskiyou and Trinity Counties—G. C. Brown. 1915-----	.50

**Advance chapters** of the **Fifteenth Report** of the State Mineralogist, for the biennial period, 1915-1916; 1917, containing complete reports upon the individual mines and mineral resources of the counties mentioned, as follows. By Fletcher Hamilton.

Chapter	Price
I. Alpine, Inyo and Mono Counties, by A. S. Eakle, E. Huguenin, R. P. McLaughlin and C. A. Waring. 176 pp., 118 illustrations, with colored geological map, \$1.25; without geological map -----	.65
II. Butte, Lassen, Modoc, Sutter and Tehama Counties, by W. B. Tucker and C. A. Waring. 91 pp., 24 illustrations-----	.50
III. El Dorado, Placer, Sacramento and Yuba Counties, by W. B. Tucker and C. A. Waring. 198 pp., 83 illustrations-----	.65
IV. Los Angeles, Orange and Riverside Counties, by F. J. H. Merrill. 136 pp., 34 illustrations-----	.50
V. Monterey, San Luis Obispo, Santa Barbara and Ventura Counties, by Walter W. Bradley, E. Huguenin, C. A. Logan and C. A. Waring. 183 pp., 59 illustrations, 3 plates-----	.65
VI. San Bernardino and Tulare Counties, by H. C. Cloudman, E. Huguenin, F. J. H. Merrill and W. B. Tucker. 186 pp., 79 illustrations, 5 plates-----	.65

## BULLETINS.

**Bulletin No. 1.** A Description of Some Desiccated Human Remains, by Winslow Anderson. 1888, 41 pp., 6 illustrations.

(Out of Print.)

---

**Bulletin No. 2.** Methods of Mine Timbering, by W. H. Storms. 1894, 58 pp., 75 illustrations.

(Out of Print.)

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**Bulletin No. 3.** Gas and Petroleum Yielding Formations of Central Valley of California, by W. L. Watts. 1894. 100 pp., 13 illustrations, 4 maps.

(Out of Print.)

---

**Bulletin No. 4.** Catalogue of Californian Fossils, by J. G. Cooper, 1894, 73 pp., 67 illustrations. (Part I was published in the Seventh Annual Report of the State Mineralogist, 1887.)

(Out of Print.)

BIBLIOGRAPHY AND REFERENCES.

NOTES ON FOSSILS COLLECTED IN ORANGE COUNTY.

DESCRIPTION AND FIGURES OF NEW SPECIES OF CRETACEOUS AND CRETACEOUS B (OR EOCENE) FOSSILS OF CALIFORNIA, WITH NOTES ON TERTIARY SPECIES.

---

**Bulletin No. 5.** The Cyanide Process, 1894, by Dr. A. Scheidel. 140 pp., 46 illustrations.

(Out of Print.)

HISTORY, SCOPE AND CHEMISTRY OF PROCESS.

METHODS OF OPERATION.

PERCENTAGE OF EXTRACTION AND WORKING COSTS.

LIST OF PATENTS.

---

**Bulletin No. 6.** California Gold Mill Practices, 1895, by E. B. Preston. 85 pp., 55 illustrations.

(Price \$0.50.)

CHOOSING MILL SITE.

MILL CONSTRUCTION.

MILL DETAILS.

POWER REQUIRED.

MILL PRACTICES.

ASSAYING AND SAMPLING.

GRINDING AND AMALGAMATING MACHINES.

TYPICAL CALIFORNIA GOLD MILLS.

SPECIFICATIONS FOR A FORTY-STAMP GOLD MILL.

**Bulletin No. 7.** Mineral Production of California, by Counties for the year 1894, by Charles G. Yale.

(Out of Print.)

TABULATED SHEET.

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**Bulletin No. 8.** Mineral Production of California, by Counties for the year 1895, by Charles G. Yale.

(Out of Print.)

TABULATED SHEET.

---

**Bulletin No. 9.** Mine Drainage, pumps, etc., by Hans C. Behr. 1896, 210 pp., 206 illustrations.

(Out of Print.)

PRELIMINARY REMARKS ON MINING PUMPS.

PIPES.

PUMP-VALVES.

PUMP SYSTEMS OPERATED BY RODS.

SINKING-PUMPS.

DIRECT-DRIVEN RECIPROCATING PUMPS.

UNDERGROUND GEARED AND BELTED CRANK-DRIVEN PUMPS.

BAILING-TANKS.

VARIOUS APPLIANCES FOR RAISING WATER FROM MODERATE DEPTHS IN MINES:

Centrifugal pumps.

Jet-lifters; Ejectors.

Pulsometers.

Air-lift pumps.

Siphons.

Appliances operated by men or animals for raising water.

WATER-RAISING MACHINERY FOR IRRIGATION OR LAND DRAINAGE.

---

**Bulletin No. 10.** A bibliography Relating to the Geology, Palæontology and Mineral Resources of California, by Anthony W. Vogdes. 1896, 121 pp.

(Out of Print.)

This bulletin contains references to the publications of the State of California, the United States Government, scientific societies, technical magazines and miscellaneous publications.

---

**Bulletin No. 11.** Oil and Gas Yielding Formations of Los Angeles, Ventura and Santa Barbara Counties, by W. L. Watts. 1897, 94 pp., 6 maps, 31 illustrations.

(Out of Print.)

DESCRIBES GEOLOGY OF THE OIL FIELDS IN THESE COUNTIES.

CONTAINS LIST OF WELLS, FIGURES ON PRODUCTION, DESCRIPTION OF MISCELLANEOUS DRILLING MACHINERY AND SKETCH MAPS OF THE VARIOUS OIL-PRODUCING DISTRICTS.

RESUME OF ORIGINAL RESEARCHES, ANALYSES, AND REFINING METHODS OF PETROLEUM, MAINLY FROM THE SOUTHERN COUNTIES OF CALIFORNIA. BY FREDERICK SALATHE.

LIST OF FOSSILS CONTAINED IN FORMATIONS UNDER DISCUSSION.

**Bulletin No. 12.** Mineral Production of California, by Counties for 1896, by Charles G. Yale.

(Out of Print.)

TABULATED SHEET.

---

**Bulletin No. 13.** Mineral Production of California, by Counties for 1897, by Charles G. Yale.

(Out of Print.)

TABULATED SHEET.

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**Bulletin No. 14.** Mineral Production of California, by Counties for 1898, by Charles G. Yale.

(Out of Print.)

TABULATED SHEET.

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**Bulletin No. 15.** Map of Oil City Fields, Fresno County, by John H. Means. 1899.

(For Free Distribution.)

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**Buletin No. 16.** The Genesis of Petroleum and Asphaltum in California, by A. S. Cooper. 1899, 39 pp., 29 illustrations.

(Out of Print.)

This bulletin also contains a chapter describing practical methods of prospecting for petroleum.

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**Bulletin No. 17.** Mineral Production of California, by Counties for 1899, by Charles G. Yale.

(Out of Print.)

TABULATED SHEET.

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**Bulletin No. 18.** Mother Lode Region of California, by W. H. Storms. 1900, 154 pp., 49 illustrations.

(Out of Print.)

GEOLOGY OF THE GOLD BELT.

DIVISIONS OF THE GOLD BELT.

CLASSIFICATION OF ROCKS.

METHODS OF MINING.

COST OF MINING.

MINING MACHINERY.

CODE OF MINE BELL SIGNALS.

CANVAS TABLES.

SLIME PLANTS.

MILL SCREEN FRAMES.

REGULATING HEIGHT OF DISCHARGE IN MILLS.

METHODS OF TIMBERING.

CHLORINATION WORKS.

**Bulletin No. 19.** Oil and Gas Yielding Formations of California, by W. L. Watts. 1900, 236 pp., 60 illustrations, 8 maps.

(Out of Print.)

GEOLOGY OF THE OIL DISTRICTS.

CHARACTER OF CALIFORNIA PETROLEUM.

HISTORICAL SKETCH OF OIL MINING IN CALIFORNIA.

PIPE-LINES AND REFINERIES.

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**Bulletin No. 20.** Synopsis of General Report of State Mining Bureau, by W. L. Watts. 1901, 21 pp. This bulletin contains a brief statement of the progress of the mineral industry in California for the four years ending December, 1899.

(Out of Print.)

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**Bulletin No. 21.** Mineral Production of California by Counties, by Charles G. Yale. 1900.

(Out of Print.)

TABULATED SHEET.

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**Bulletin No. 22.** Mineral Production of California for Fourteen Years, by Charles G. Yale. 1900.

(Out of Print.)

TABULATED SHEET.

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**Bulletin No. 23.** The Copper Resources of California, by P. C. DuBois, F. M. Anderson, J. H. Tibbits and G. A. Tweedy. 1902, 282 pp., 69 illustrations, and 9 maps.

(Price \$0.50.)

HISTORICAL NOTES RELATIVE TO COPPER MINING INDUSTRY IN CALIFORNIA.  
GEOLOGY AND DETAILED DESCRIPTION OF THE FOLLOWING DISTRICTS:

Shasta County.

Coast Range Belt.

Sierra Nevada Belt.

Southern Belt.

Eastern Belt.

**Bulletin No. 24.** The Saline Deposits of California, by G. E. Bailey.  
1902, 216 pp., 99 illustrations, 5 maps.

(Out of Print.)

MAP OF SALINE DEPOSITS OF SOUTHERN PORTION OF CALIFORNIA.  
RELIEF MAP OF CALIFORNIA.  
MAP OF LAKES LE CONTE AND AUBURY.  
MAP OF MOHAWK DESERT DRY LAKES.  
MAP OF CALIFORNIA, SHOWING LOCATION OF SALINE DEPOSITS.  
THE GREAT BASIN.  
GEOLOGICAL HISTORY.  
BORATES.  
HISTORICAL NOTES ON BORATES.  
BORAX PRODUCTION OF CALIFORNIA.  
BORATES BY COUNTIES.  
SPRINGS CONTAINING BORATES.  
DESERT SPRINGS, LIST AND LOCATION OF.  
MANUFACTURE OF BORAX.  
BORAX MINERALS.  
CARBONATES.  
NATURAL SODA.  
OWENS LAKE.  
MINERALOGY OF CARBONATES.  
SALT.  
MINERALOGY OF MINERAL CHLORIDES.  
SALTON SEA.  
NITRATES.  
NITER IN CHILE.  
HISTORICAL NOTES ON NITER.  
CHEMICAL NOTES ON NITER.  
CALIFORNIA NITER DEPOSITS.  
MINERALOGY OF NITRATES.  
NITER ANALYSES.  
NOTES ON FERTILIZERS.  
ELEVATIONS.  
BIBLIOGRAPHY.

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**Bulletin No. 25.** Mineral Production of California, by Counties, for  
1901, by Charles G. Yale.

(Out of Print.)

TABULATED SHEET.

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**Bulletin No. 26.** Mineral Production of California for the Past Fifteen  
Years, by Charles G. Yale. 1902.

(Out of Print.)

TABULATED SHEET.

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**Bulletin No. 27.** The Quicksilver Resources of California, by William  
Forstner. 1903, 273 pp., 144 illustrations, 8 maps.

(Out of Print.)

GEOLOGICAL MAP OF PARTS OF NAPA, SONOMA AND LAKE COUNTIES QUICKSILVER  
DISTRICTS.  
MAP OF SULPHUR CREEK DISTRICT.  
CONDITION OF THE QUICKSILVER INDUSTRY.  
GEOLOGY OF QUICKSILVER BELT OF CALIFORNIA.  
ORE DEPOSITS.



GENESIS OF QUICKSILVER ORE DEPOSITS.  
 DISTRICTS AND MINES NORTH OF SAN FRANCISCO.  
 DISTRICTS AND MINES SOUTH OF SAN FRANCISCO.  
 NEW ALMADEN MINE, TOTAL OUTPUT.  
 QUICKSILVER IN TRINITY AND OTHER COUNTIES.  
 METALLURGY OF QUICKSILVER.  
 CONCENTRATING SYSTEM.  
 FURNACES.  
 CONDENSERS.  
 SOOT-CLEANING MACHINES.  
 ELEVATIONS OF MINES BY COUNTIES.

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**Bulletin No. 28.** Mineral Production of California, for 1902, by Charles G. Yale.

(Out of Print.)

TABULATED SHEET.

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**Bulletin No. 29.** Mineral Production of California for Sixteen Years, by Charles G. Yale. 1903.

(Out of Print.)

TABULATED SHEET.

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**Bulletin No. 30.** Bibliography Relating to the Geology, Palæontology, and Mineral Resources of California, by A. W. Vogdes. 1903. 290 pp.

(Out of Print.)

REFERENCES TO:

Publications of State of California.  
 State Geological Surveys.  
 Surveyor General's reports.  
 State Mining Bureau publications.  
 California, Senate and Assembly documents.  
 University of California publications.  
 Publications of United States Government.  
 Publications of Senate and House of Representatives.  
 Reports of Secretary of War.  
 Navy publications.  
 Railroad explorations and surveys.  
 Mineral resources of Western States.  
 U. S. Mint reports on mineral resources.  
 Coast Survey reports.  
 Census reports.  
 Geological and Geographical Surveys.  
 U. S. Geological Survey reports.  
 Smithsonian Institution reports.  
 National Museum proceedings.  
 Publications of scientific societies.  
 Geological Surveys other than California.  
 Miscellaneous publications. Lists of authors.  
 Cartography of California.  
 Maps published by State Mining Bureau.  
 Authors of works on California mining.

**Bulletin No. 31.** Chemical Analyses of California Petroleum, by H. N. Cooper. 1904.

(Out of Print.)

TABULATED SHEET.

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**Bulletin No. 32.** Production and Use of Petroleum in California, by Paul W. Prutzman. 1904. 230 pp., 116 illustrations, 14 maps.

(Price \$0.25.)

MAP OF OIL DISTRICTS OF CALIFORNIA.  
MAP OF FULLERTON OIL FIELDS.  
MAP OF PUENTE OIL FIELD.  
MAP OF WHITTIER OIL FIELD.  
MAP OF CITY OIL FIELD OF LOS ANGELES.  
MAP OF EASTERN PORTION OF NEWHALL OIL FIELD.  
MAP OF SUMMERLAND OIL FIELD.  
MAP OF KERN RIVER OIL FIELD.  
MAP OF SUNSET OIL FIELD.  
MAP OF MIDWAY OIL FIELDS.  
MAP OF MCKITTRICK OIL FIELDS.  
MAP OF COALINGA OIL FIELDS.  
MAP OF SANTA MARIA OIL FIELDS.  
MAP OF VENTURA OIL FIELDS.  
HISTORY AND PRODUCTION OF OIL IN CALIFORNIA.  
TOPOGRAPHY AND GEOLOGY.  
DRILLING.  
COST OF WELL.  
FIELD OPERATIONS.  
USES OF CRUDE OIL.  
PHYSICAL CHARACTERISTICS OF CALIFORNIA CRUDE OIL.  
CALORIFIC VALUE.  
USE OF OIL FOR FUEL.  
ECONOMY OF USE.  
COMBUSTION.  
EVAPORATIVE TESTS.  
INJECTORS AND BURNERS.  
FIREBOXES.  
STORAGE AND HISTORY.  
REGULATION OF OIL FIRES.  
LIQUID FUEL ON LOCOMOTIVES.  
CONVERTING COAL BURNERS TO OIL BURNERS.  
LOCOMOTIVE FUEL TESTS.  
LIQUID FUEL ON STEAMSHIPS.  
OIL USING VESSELS.  
GOVERNMENT BOILER TESTS.  
MINOR USES OF FUEL OIL.  
PETROLEUM IN GAS-MAKING.  
OILED ROADS.  
OIL-REFINING INDUSTRY.  
REFINERY OILS, ANALYSES.  
METHODS OF REFINING.  
ASPHALT FROM OIL.  
CHEMISTRY OF CALIFORNIA PETROLEUM.

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**Bulletin No. 33.** Mineral Production of California, by Counties, for 1903, by Charles G. Yale.

(Out of Print.)

TABULATED SHEET.

**Bulletin No. 34.** Mineral Production of California for Seventeen Years, by Charles G. Yale. 1904.

(Out of Print.)

TABULATED SHEET.

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**Bulletin No. 35.** Mines and Minerals of California, by Charles G. Yale. 1904, 55 pp., 20 county maps. Relief map of California.

(Out of Print.)

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**Bulletin No. 36.** Gold Dredging in California, by J. E. Doolittle. 1905, 120 pp., 66 illustrations, 3 maps.

(Out of Print.)

RELIEF MAP OF CALIFORNIA.  
MAP OF DREDGING LANDS NEAR FEATHER RIVER.  
MAP OF DREDGING LANDS IN FOLSOM DISTRICT.  
HISTORY OF DREDGING OPERATIONS.  
AREA OF DREDGE GRAVELS.  
GEOLOGY.  
AGRICULTURE.  
TYPES OF DREDGES.  
HORSEPOWER REQUIRED.  
SCREENS AND SLUICES.  
DREDGE CREWS.  
WORKING COSTS.  
DREDGE RECORDS.  
PROSPECTING AND EXAMINATION OF CONDITIONS.  
DREDGE MINING DISTRICTS OF CALIFORNIA.  
DREDGE DATA.

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**Bulletin No. 37.** Gems, Jewelers' Materials, and Ornamental Stones of California, by George F. Kunz. 1905, 168 pp., 54 illustrations.

(Price \$0.25.)

DISTRIBUTION OF GEM MINERALS IN CALIFORNIA.  
HISTORICAL OUTLINE.  
PROPERTIES OF GEMS.  
LOCALITIES WHERE FOUND IN CALIFORNIA.  
GEM MINES IN CALIFORNIA.

**Bulletin No. 38.** Structural and Industrial Materials of California,  
by Wm. Forstner, T. C. Hopkins, C. Naramore and L. H. Eddy.  
1906, 412 pp., 150 illustrations, 1 map.

(Out of Print.)

MAP SHOWING AREA OF GRANITE OUTCROPPING IN CALIFORNIA.  
ECONOMIC FEATURES OF CALIFORNIA BUILDING STONES.  
CLASSIFICATION OF BUILDING STONES.  
REFERENCES ON CALIFORNIA BUILDING STONES.  
KINDS OF BUILDING STONES IN CALIFORNIA.  
SELECTION OF BUILDING STONES.  
DURABILITY OF BUILDING STONES.  
METHODS OF ASCERTAINING DURABILITY OF BUILDING STONES.  
ARTIFICIAL PRESERVATIVES.  
GRANITE.  
GRANITE QUARRIES AND DISTRICTS IN CALIFORNIA.  
LIMESTONE AND LIME.  
DISTRIBUTION OF LIMESTONE IN CALIFORNIA.  
USES OF LIMESTONE AND LIME.  
LIMEKILNS.  
MARBLE.  
REFERENCES ON CALIFORNIA MARBLE.  
MARBLE DISTRIBUTION IN CALIFORNIA.  
SANDSTONE.  
SANDSTONE QUARRIES IN CALIFORNIA.  
SERPENTINE.  
SLATE.  
REFERENCES ON CALIFORNIA SLATE.  
SLATE IN CALIFORNIA.  
VOLCANIC AND INTRUSIVE ROCKS.  
ARTIFICIAL STONE.  
CEMENT PRODUCTS.  
PORTLAND CEMENT INDUSTRY: USES; TESTS; ANALYSES; REFERENCES ON;  
PLANTS IN CALIFORNIA.  
CLAYS AND CLAY INDUSTRIES OF CALIFORNIA.  
CLAY, ORIGIN OF; CHEMICAL COMPOSITION; PHYSICAL PROPERTIES; HIGH-GRADE  
CLAYS; LOW-GRADE CLAYS.  
ADOBE.  
BUILDING BRICK MANUFACTURE.  
BRICK-MAKING MACHINES.  
BRICK, CLASSIFICATION OF.  
ANTIMONY.  
ASBESTOS.  
BARYTES.  
BAUXITE.  
CALCAREOUS TUFFA.  
CHROMITE.  
CONCRETE ROCK.  
FULLER'S EARTH.  
GLASS-MAKING MATERIALS.  
GRAPHITE.  
GYPSUM.  
INFUSORIAL OR DIATOMACEOUS EARTH  
IRON ORE.  
JASPER.  
LITHIA.  
MACADAM.  
MAGNESITE.  
MANGANESE.  
MICA.  
MINERAL PAINT.  
ONYX.  
PAVING BLOCKS.

PLATINUM.  
PYRITES.  
RUBBLE.  
QUARTZ CRYSTALS.  
SOAPSTONE.  
TALC.  
SULPHUR.  
TUNGSTEN.  
ZINC.  
SPECIMENS OF STRUCTURAL SUBSTANCES IN BUREAU MUSEUM.

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**Bulletin No. 39.** Mineral Production of California, by Counties, for 1904, by Charles G. Yale.

(Out of Print.)

TABULATED SHEET.

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**Bulletin No. 40.** Mineral Production of California for Eighteen Years, by Charles G. Yale. 1905.

(Out of Print.)

TABULATED SHEET.

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**Bulletin No. 41.** Mines and Minerals of California, for 1904, by Charles G. Yale. 1905, 54 pp., 20 county maps.

(Out of Print.)

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**Bulletin No. 42.** Mineral Production of California, by Counties, 1905, by Charles G. Yale.

(Out of Print.)

TABULATED SHEET.

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**Bulletin No. 43.** Mineral Production of California for Nineteen Years, by Charles G. Yale.

(Out of Print.)

TABULATED SHEET.

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**Bulletin No. 44.** California Mines and Minerals for 1905, by Charles G. Yale. 1907, 31 pp., 20 county maps.

(Out of Print.)

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**Bulletin No. 45.** Auriferous Black Sands of California, by J. A. Edman. 1907, 10 pp.

(Out of Print.)

**Bulletin No. 46.** General Index of Publications of the California State Mining Bureau, by Charles G. Yale. 1907, 54 pp.

(Price \$0.30.)

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**Bulletin No. 47.** Mineral Production of California, by Counties, 1906, by Charles G. Yale.

(Out of Print.)

TABULATED SHEET.

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**Bulletin No. 48.** Mineral Production of California for Twenty Years, 1906, by Charles G. Yale.

(Out of Print.)

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**Bulletin No. 49.** Mines and Minerals of California for 1906, by Charles G. Yale. 34 pp.

(Out of Print.)

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**Bulletin No. 50.** The Copper Resources of California, 1908, by A. Hausmann, J. Kruttschnitt, Jr., W. E. Thorne and J. A. Edman. 366 pp., 74 illustrations.

(Price \$1.00.)

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THE CONDITION OF THE INDUSTRY.

STATISTICS OF PRODUCTION.

HISTORICAL NOTES.

DETAILED DESCRIPTION AND LIST OF MINES IN:

Shasta County.

The Coast Range Copper Belt.

Sierra Nevada Belt.

Southern and Eastern Belts.

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**Bulletin No. 51.** Mineral Production of California, by Counties, 1907, by D. H. Walker.

(Out of Print.)

TABULATED SHEET.

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**Bulletin No. 52.** Mineral Production of California for Twenty-one Years, 1907, by D. H. Walker.

(Out of Print.)

TABULATED SHEET.

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**Bulletin No. 53.** Mineral Production of California for 1907, with County Maps, by D. H. Walker. 62 pp.

(Out of Print.)

**Bulletin No. 54.** Mineral Production of California, by Counties, by D. H. Walker, 1908.

(Out of Print.)

TABULATED SHEET.

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**Bulletin No. 55.** Mineral Production of California for Twenty-two Years, by D. H. Walker, 1908.

(Out of Print.)

TABULATED SHEET.

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**Bulletin No. 56.** Mineral Production for 1908, with County Maps and Mining Laws of California, by D. H. Walker. 78 pp.

(Out of Print.)

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**Bulletin No. 57.** Gold Dredging in California, by W. B. Winston and Chas. Janin. 1910. 312 pp., 239 illustrations and 10 maps.

(Out of Print.)

HISTORICAL AND GEOLOGICAL SKETCH OF GOLD DREDGING IN CALIFORNIA.  
PROSPECTING DREDGING GROUND.  
DREDGE CONSTRUCTION AND OPERATION.  
WORKING COSTS.  
DETAILED DESCRIPTION OF VARIOUS DREDGING DISTRICTS IN THE STATE.  
RECLAIMING DREDGED LANDS.  
DEBRIS PROBLEMS.  
DESCRIPTION OF DREDGING OPERATIONS IN OTHER STATES AND IN FOREIGN COUNTRIES.

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**Bulletin No. 58.** Mineral Production of California, by Counties, by D. H. Walker, 1909.

(Out of Print.)

TABULATED SHEET.

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**Bulletin No. 59.** Mineral Production of California for Twenty-three Years, by D. H. Walker, 1909.

(Out of Print.)

TABULATED SHEET.

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**Bulletin No. 60.** Mineral Production for 1909, County Maps and Mining Laws of California, by D. H. Walker. 94 pp.

(Out of Print.)

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**Bulletin No. 61.** Mineral Production of California, by Counties for 1910, by D. H. Walker.

(Out of Print.)

TABULATED SHEET.

**Bulletin No. 62.** Mineral Production of California for Twenty-four Years, by D. H. Walker, 1910.

(For Free Distribution.)

TABULATED SHEET.

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**Bulletin No. 63.** Petroleum in Southern California, by P. W. Prutzman. 1912, 430 pp., 41 illustrations, 6 maps.

(Price \$0.75.)

TOPOGRAPHY AND CLIMATE OF CALIFORNIA.

OIL DEVELOPMENTS.

METHODS OF OIL ANALYSIS.

DETAILED DESCRIPTION OF OIL DISTRICTS AND SUMMARY OF OPERATIONS IN SOUTHERN CALIFORNIA.

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**Bulletin No. 64.** Mineral Production for 1911, by E. S. Boalich. 49 pp.

(Out of Print.)

THE MINERAL INDUSTRY IN 1911.

AMOUNT AND VALUE OF PRODUCTION.

ITEMIZED OUTPUT BY MINERAL, AND BY COUNTIES ALPHABETICALLY ARRANGED.

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**Bulletin No. 65.** Mineral Production for 1912, by E. S. Boalich. 64 pp.

(For Free Distribution.)

Production, prices and uses of various mineral substances arranged according to class of minerals, and alphabetically by counties.

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**Bulletin No. 66.** Mining Laws of the United States and California. 1914, 89 pp.

(Out of Print.)

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**Bulletin No. 67.** Minerals of California, by Arthur S. Eakle. 1914, 226 pp.

(Price \$1.00.)

Contains a complete list of the known minerals in California, and notation of the localities where each occurs. The various kinds of minerals have been grouped under a chemical classification. Chemical formulæ are cited, and chemical analyses given; also includes an exhaustive bibliography on California minerals.

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**Bulletin No. 68.** Mineral Production for 1913, with County Maps and Mining Laws, by E. S. Boalich. 160 pp.

(For Free Distribution.)

Production, prices and uses of various mineral substances, arranged according to class of minerals, and alphabetically by counties.



**Bulletin No. 69.** Petroleum Industry of California, with Folio of Maps (18 by 22), by R. P. McLaughlin and C. A. Waring. 1914. 519 pp., 13 illustrations, 83 figs. [18 plates in accompanying folio.]

(Price \$2.00.)

EXTENT AND LOCATION OF CALIFORNIA OIL DEPOSITS.  
COST OF EXTRACTING OIL FROM THE DEPOSITS.  
MARKETING AND FINANCIAL CONDITIONS GOVERNING THE OIL INDUSTRY.  
PRODUCTIVE CAPACITY OF OIL LANDS.  
UNDERGROUND MOVEMENT OF OIL.  
EVAPORATION LOSS OF OIL.  
TEMPERATURE CORRECTION IN MEASURING OIL.  
PHYSICAL AND CHEMICAL PROPERTIES OF CALIFORNIA OILS.  
TRANSPORTATION BY WATER, RAIL AND PIPE LINES.  
SPECIFICATIONS AND COSTS OF REFINERIES AND TANKS.  
REFINERIES.  
GASOLINE FROM NATURAL GAS.  
GAS PRODUCTION.  
DEVELOPMENT OF RATE AND PRODUCTION.  
FINANCIAL RESULTS.  
DRILLING METHODS IN DETAIL FOR THE VARIOUS OIL FIELDS IN THE STATE.  
BIBLIOGRAPHY, INCLUDING THE PUBLICATIONS OF THE STATE AND FEDERAL GOVERNMENTS, AS WELL AS REFERENCES TO ARTICLES IN THE TECHNICAL PRESS.

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**Bulletin No. 70.** Mineral Production for 1914, with County Maps and Mining Laws. 184 pp.

(Out of Print.)

Production, prices and uses of various mineral substances, arranged according to class of minerals, and alphabetically by counties.

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**Bulletin No. 71.** Mineral Production for 1915, with County Maps and Mining Laws, by Walter W. Bradley. 193 pp., 4 illustrations.

(Out of Print.)

Production, prices and uses of various mineral substances arranged according to class of minerals, and alphabetically by counties.

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**Bulletin No. 72.** The Geologic Formations of California, with Reconnaissance Geologic Map, by James Perrin Smith. 1916. 47 pp.

(Price \$0.25.)

DETAILED LEGEND FOR RECONNAISSANCE GEOLOGIC MAP OF CALIFORNIA.  
THE GEOLOGIC RECORD OF CALIFORNIA.  
ROCK FORMING AGENCIES OF CALIFORNIA.  
GEOLOGIC TABLES.  
SOURCES OF DATA FOR THE GEOLOGIC MAP.  
DETAILED DESCRIPTION OF FORMATIONS SHOWN ON THE MAP.  
(See also under MAPS.)

**Bulletin No. 73.** First Annual Report of the State Oil and Gas Supervisor of California, for the fiscal year 1915-16, by R. P. McLaughlin. 278 pp., 26 illustrations.

(Out of Print.)

GENERAL STATEMENT OF WORK AND POLICY OF THE DEPARTMENT OF PETROLEUM AND GAS.

CAUSES OF DAMAGE BY WATER.

OIL WELL LOGS.

CROSS SECTIONS AND THEIR USE.

REPORTS OF WELL PRODUCTION.

NOTICES REQUIRED BY LAW.

FINANCIAL STATEMENT.

PROVED OIL LANDS.

REVIEW OF WORK IN VARIOUS FIELDS.

METHODS OF SHUTTING OFF WATER.

STRENGTH OF CASING AND FAILURE OF DERRICKS.

GASOLINE PLANTS IN MIDWAY FIELD.

GASOLINE EXTRACTION FROM NATURAL GAS BY ABSORPTION PROCESS.

DIRECTORY OF OIL COMPANIES, SHOWING DATE OF INCORPORATION, CAPITAL STOCK, NUMBER OF WELLS, LOCATION OF PROPERTIES.

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**Bulletin No. 74.** Mineral Production of California in 1916, with County Maps, by Walter W. Bradley. 179 pp., 12 illustrations.

(For Free Distribution.)

Production, prices and uses of various mineral substances arranged according to class of minerals, and alphabetically by counties.

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**Bulletin No. 75.** United States and California Mining Laws.

(For Free Distribution.)

MINING BUREAU ACT.

DEPARTMENT OF PETROLEUM AND GAS.

FEDERAL STATUTES.

PLACERS.

OIL AND GAS CLAIMS.

THE PICKETT BILL.

POTASH EXPLORATION.

MINING CLAIMS IN FOREST RESERVES.

CALIFORNIA DEBRIS COMMISSION.

REGULATIONS FOR EXPLOSIVES.

INSTRUCTIONS TO OWNERS AND OPERATORS OF HYDRAULIC MINES IN CALIFORNIA.

CALIFORNIA STATUTES.

CORPORATION LICENSE TAX LAW.

PROTECTION OF STOCKHOLDERS.

TO PREVENT WASTING OF NATURAL GAS.

USE OF CALIFORNIA MATERIALS IN CALIFORNIA PUBLIC BUILDINGS.

LANDS UNCOVERED BY RECESSION OF WATER.

EXTRACTION OF MINERALS FROM WATER.

HYDRAULIC MINING.

MINERAL LANDS WITHIN MEANDER LINES OF LAKES AND STREAMS.

THE RIGHT OF EMINENT DOMAIN.

TRIALS INVOLVING MINING CLAIMS.

LOCATION OF MINING CLAIMS, MILL SITES, AND ASSESSMENT WORK.

REGULATIONS PROVIDED FOR CONTROL OF EXPLOSIVES.

REGULATION OF HOURS OF EMPLOYMENT.

PROVIDING FOR MINE EXITS.

TELEPHONE SYSTEM IN MINES.

FENCING ABANDONED SHAFTS.  
MINE REGULATIONS—COAL MINES.  
WEEKLY DAY OF REST.  
MINERS' HOSPITAL.  
LARCENY OF GOLD DUST AND AMALGAM.  
MINER'S INCH DEFINED.  
FORMS FOR LOCATION NOTICES.  
BLUE SKY LAW.  
WATER COMMISSION ACT.  
ABSTRACT OF CURRENT DECISIONS ON MINES AND MINING.  
EXTRACTS FROM BULLETINS, U. S. BUREAU OF MINES. MINING CLAIMS,  
MINERALS AND MINERAL LANDS.  
MINE SAFETY RULES.  
SOLDIERS AND SAILORS TEMPORARILY RELIEVED FROM ASSESSMENT WORK.  
ASSESSMENT WORK SUSPENDED DURING 1917 AND 1918 (Public Resolution  
No. 12.)

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**Bulletin No. 76.** Manganese and Chromium in California.

(In Press.)

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**Bulletin No. 77.** Catalogue of Publications of California State Mining  
Bureau, 1880-1917. By E. S. Boalich.

(For Free Distribution.)

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**Bulletin No. 78.** Quicksilver Resources of California.

(In Press.)

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**Bulletin No. 79.** Magnesite in California.

(In Press.)

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**Bulletin No. 80.** Tungsten, Molybdenum and Vanadium in California.

(In Preparation.)

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**Bulletin No. 81.** Foothill Copper Belt of California.

(In Preparation.)

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**Bulletin No. 82.** Second Annual Report of the Oil and Gas Super-  
visor, for the fiscal year 1916-1917.

(In Press.)

PRELIMINARY REPORTS.

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**Preliminary Report No. 1.** Notes on Damage by Water in California Oil Fields, December, 1913. By R. P. McLaughlin. 4 pp.

(Out of Print.)

SUBJECT MATTER INCLUDED IN BULLETIN 69.

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**Preliminary Report No. 2.** Notes on Damage by Water in California Oil Fields, March, 1914. By R. P. McLaughlin. 4 pp.

(Out of Print.)

SUBJECT MATTER INCLUDED IN BULLETIN 69.

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**Preliminary Report No. 3.** Manganese and Chromium, 1917. By E. S. Boalich. 32 pp.

(Out of Print.)

PRELIMINARY TO BULLETIN 76, NOW IN PRESS.

Notes on occurrence, uses, prices and market conditions relative to manganese and chrome ores; together with lists of owners and operators of deposits, and buyers and consumers of the ores.

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**Preliminary Report No. 4.** Antimony, Graphite, Molybdenum, Nickel, Potash, Strontium, Tin and Tungsten.

(In Preparation.)

MISCELLANEOUS PUBLICATIONS.

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**First Annual Catalogue of the State Museum of California**, being the collection made by the State Mining Bureau during the year ending April 16, 1881. 350 pp.

(Out of Print.)

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**Catalogue of books, maps, lithographs, photographs, etc.**, in the library of the State Mining Bureau at San Francisco, May 15, 1884. 19 pp.

(Out of Print.)

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**Catalogue of the State Museum of California**, Volume II, being the collection made by the State Mining Bureau from April 16, 1881, to May 5, 1884. 220 pp.

(Out of Print.)

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**Catalogue of the State Museum of California**, Volume III, being the collection made by the State Mining Bureau from May 15, 1884, to March 31, 1887. 195 pp.

(Out of Print.)

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**Catalogue of the State Museum of California**, Volume IV, being the collection made by the State Mining Bureau from March 30, 1887, to August 20, 1890. 261 pp.

(Out of Print.)

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**Catalogue of the Library of the California State Mining Bureau**, September 1, 1892. 149 pp.

(Out of Print.)

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**Catalogue of West North American and many Foreign Shells with their Geographical Ranges**, by J. G. Cooper. Printed for the State Mining Bureau, April, 1894.

(Out of Print.)

**Report of the Board of Trustees** for the Four Years Ending September, 1900. 15 pp.

(Out of Print.)

**Bulletin.** Reconnaissance of the Colorado Desert Mining District, by Stephen Bowers. 1901. 19 pp., 2 illustrations.

(Out of Print.)

CONTAINS DESCRIPTION OF:

Coyote Wells District.  
Carrizo Creek District.  
Fish Creek District.  
Seventeen Palm Springs District.

MAPS.

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*Siskiyou County .....	----
*Trinity County .....	----
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Register of Oil Wells (with map), Los Angeles City .....	.35

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## OTHER MAPS.

**Geological Map of California, 1916.**

(Price \$2.50, Mounted.)

SCALE 1 IN.=12 MILES.

As accurate and up-to-date as available data will permit as regards topography and geography. Shows railroads, highways, post offices and other towns. First geological map which has been available since 1892, and shows geology of entire state as no other map does. Geological details lithographed in 23 colors. Detailed description given in Bulletin 72 (see pp. 8-10).

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Copper Deposits in California-----	.05
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Tuolumne County -----	.25

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NOTE.—

**DETERMINATION OF MINERAL SAMPLES.**

Samples (limited to three at one time) of any mineral found in the state may be sent to the Bureau for identification, and the same will be classified free of charge. No samples will be determined if received from points outside the state. It must be understood that no assays, or quantitative determinations will be made. Samples should be in lump form if possible, and marked plainly with name of sender on outside of package, etc. No samples will be received unless delivery charges are prepaid. A letter should accompany sample, giving locality where mineral was found and the nature of the information desired.





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